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September 8, 2006

VIA U.S. MAIL, E-MAIL,
and FACSIMILE

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Supplemental Comments on Proposed Revisions to WDR Order 95-199

Dear Messrs. Pedri and Rohrbach and Members of the Board:

Thank you for the opportunity to provide additional comments on the proposed revisions to Waste Discharge Requirements ("WDR") Order 95-199. This letter provides supplemental legal comments on behalf of the Pit River Tribe, the Mount Shasta Bioregional Ecology Center, and the Native Coalition for Medicine Lake Highlands Defense (collectively "Clients"). As you know, we provided written and oral comments on behalf of these Clients in connection with the May 4, 2006 initial hearing on this permit, and our Clients and their technical expert are submitting additional comments in advance of the September 22, 2006 continued hearing. Their supplemental comments attempt to address the technical issues that were of concern to Members of the Board during the prior hearing, although project proponent Calpine's refusal to provide us with available information about the resources at issue has severely hindered our Clients' ability to fully respond to the Board's request. The following supplemental comments address the legal issues raised by Staff and the Board's Legal Counsel during the May 4 hearing, and attempt to clarify what appeared to be some confusion with respect to these issues. As noted below, this confusion continues to plague the draft documents posted on the Board's website for the September 22 hearing.

A. Brief History of WDR Order 95-199

Because there appeared to be some confusion about the current status and scope of existing WDR Order 95-199, we believe it is critical to briefly review the history of this permit before we address our substantive legal concerns. The "Telephone Flat Geothermal Exploration and Development Projects" at issue have a lengthy regulatory history, dating back to the 1980's. Of most relevance here, in the mid-1990's, Calpine's predecessor-in-interest, California Energy General Corp. ("CalEnergy"), purchased certain federal leases from Unocal Corporation and filed a Report of Waste Discharge for its proposed exploration activities. Unfortunately, despite our Clients' Public Record Act requests for this Report of Waste Discharge and their subsequent in-person file review at the Board's Sacramento offices, a copy of that original application still has not been provided to us. However, it is clear from WDR Order 95-199 itself, and from Staff's subsequent interpretation of it, that the activities covered by the 1995 permit are quite limited.

In particular, in January 1994 Calpine first proposed to drill five deep test wells and to complete testing on those wells within 60 days, starting in the summer of 1994 and concluding by October 1995. *See* Calpine Project Description (Attachment at 1-4). Three of these proposed wells were subsequently incorporated into CalEnergy's proposed "Plan of Operation for Geothermal Exploration Activities," which was noticed to the general public in September 1994. In that notice, the federal government described the CalEnergy Plan of Operation as including five specific temperate gradient holes and five exploration holes on various leaseholds in the Medicine Lake Highlands, to be completed for the express "purpose of both identifying and verifying the presence of a commercially viable geothermal resources." *See* Sept. 23, 1994 Notice to Interested Party (Attachment at 5-11). This limited exploration project involved very specific activities and, as is clear from the original notice, did not propose the kind of acidization that is now being considered.

The federal Bureau of Land Management ("BLM") and the Siskiyou County Air Pollution Control District ("SCAPCD") then prepared a short "Environmental Assessment/Initial Study" for CalEnergy's proposed Plan of Operation that described the project in more detail, discussed the particular well procedures and operations to be employed, and explained the potential environmental impacts. Notably, this key environmental review document was focused on the particular well sites and operations being contemplated and did not cover other wells or other types of hazardous operations, such as acidization. *See* 1995 Glass Mountain Unit Geothermal Exploration Project Environmental Assessment/Initial Study ("EA/IS") (selected pages in Attachment at 12-33). Indeed, the document explains that if a well does not "demonstrate satisfactory commercial potential," it will be worked over "by converting the well to an injection well if appropriate, completing the well as an observation well, or plugging and abandoning the well." 1995 EA/IS at 2-11 (Attachment at 20). As with the other public documents for the

project, the EA/IS does not mention, let alone evaluate, the possibility of fracturing the geothermal reservoir by injecting thousands of gallons of toxic acid into the wells, or the potential impacts of doing so. Indeed, there was no reason to believe in 1995 that such extreme measures would be necessary to stimulate the resource because the wells had not yet been drilled and found to be wanting. Based on the description and analysis in the EA/IS, BLM and SCAPCD approved the project as proposed, without modification to authorize or accommodate acidization. *See* Aug. 1, 1995 SCAPCD Notice of Determination; Aug. 25, 1995 BLM approval and Finding of No Significant Impact (Attachment at 34-37).

Shortly thereafter, the Regional Board approved WDR Order 95-199 to cover the same exploratory project. The WDR Order expressly relied on the analysis and conclusion in the 1995 EA/IS that the proposed project "will cause no significant impacts to water quality." *See* WDR Order 95-199 (Attachment at 40). There is no discussion in the WDR Order of acidization and no express authorization to use such hazardous chemicals in the exploratory wells being contemplated, let alone in subsequently developed or planned exploration and development wells. *See* Attachment at 38-48. The very limited nature of this permit was made clear in the accompanying Information Sheet, which explained that "[p]otential adverse impacts to water quality from *exploratory* geothermal activities have been evaluated and documented in the Glass Mountain Unit Exploration Project . . . *Exploratory* geothermal activities are expected to have negligible adverse impacts on water quality when conducted as proposed." In an October 15, 1999 letter to the Mount Shasta Bioregional Ecology Center, Mr. Pedri confirmed this understanding, assuring our Clients that "the current WDRs are adequate to protect water quality for the *limited exploration work proposed for the area.*" *See* Oct. 15, 1999 Letter from James Pedri (Attachment at 49) (emphasis added). Thus, an expansive array of new development wells, potentially enhanced by thousands of gallons of toxic acids, was never contemplated by WDR Order 95-199 or by the underlying environmental review documentation that supported it.

After acquiring the geothermal leases for the Telephone Flat area and receiving federal approval for its development project, Calpine submitted a new Report of Waste Discharge seeking a revision of WDR Order 95-199. Calpine's proposed revisions would effect three significant changes. First, Calpine is requesting permission to use potentially large quantities of hydrochloric and/or hydrofluoric acid to fracture open the geothermal reservoir, thereby raising a host of new questions about potential adverse impacts to surface water and groundwater. Second, Calpine seeks to have the revised WDR Order cover not only temporary exploration activities, but also permanent development activities that will continue literally for decades to come. Third, the expansive revisions requested by Calpine would cover at least two dozen new wells that could be used both for exploration and then permanent development, over and above the original five well pads authorized in 1995.

B. Adequate Environmental Review Has Never Been Done for the Proposed Revisions.

As we noted in our April 24, 2006 comments on this proposal, and at the May 4, 2006 initial hearing on the matter, there has never been any environmental review of the impacts from, and alternatives to/mitigation for, well acidization in any of the publicly circulated documents under either the National Environmental Policy Act ("NEPA") or the California Environmental Quality Act ("CEQA"). *See* April 4, 2006 Letter from Stanford Legal Clinics (Attachment at 50-55). As is clear from the foregoing discussion and supporting documents, absolutely no mention or analysis of acidization is contained in the documents supporting WDR Order 94-199, and equally obvious, acidization was not contemplated by either the Regional Board or the other regulatory agencies. As we explained in our April 24 letter, none of the four later NEPA and CEQA documents prepared for subsequent activities or approvals contains any discussion or analysis of acidization activity.[1]

At the May 4, 2006 hearing, Staff for the first time made the argument that a document entitled "Update Assessment for the Telephone Flat Geothermal Development Project Final Environmental Impact Statement/Environmental Impact Report," prepared by Siskiyou County in November 2002, constituted adequate CEQA review for the proposed acidization in existing and dozens of new wells. Moreover, Staff Legal Counsel suggested that because the Update Assessment was not appealed or challenged, our Clients had missed their opportunity to object to the adequacy of this environmental review. Staff's argument is legally flawed because it fundamentally misapprehends the nature of the Update Assessment. In fact, *the Update Assessment was not a document circulated for public review and comment under CEQA*. Rather, it was an internal Siskiyou County document prepared for the purpose of assessing whether there had been any changes in the project since issuance of the Development Project EIS/EIR in 1999. It merely concluded that there were no significant changes in the project, as conceived and evaluated in the 1999 EIS/EIR; it did not evaluate the impacts of, or alternatives or mitigation for, acidizing both exploratory and development wells. *See* Nov. 2002 Update Assessment (Attachment at 56-

[1] These include the Fourmile Hill Geothermal Exploration Project EA/IS (Dec. 1995), Glass Mountain Exploration EA/IS (May 2002), Draft Telephone Flat Geothermal Development Project EIS/EIR (May 1998), and Final Telephone Flat Geothermal Development Project EIS/EIR (Feb. 1999). We have not included all of this voluminous documentation in our Attachment so as not to overburden the Board, but as the Information Sheet for the Tentative Order makes clear, these documents are available in the Board's internal files.

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For this reason, and as both BLM and the North Coast Regional Water Quality Control Board have properly concluded, further environmental review of acidization is necessary. *See* April 28, 2006 Letter from Timothy J. Burke and Aug. 8, 2002 Letter from Miguel Villicana (Attachment at 92-95). Moreover, as we explained in our April 24 letter, where the original CEQA documentation does not address significant new issues raised by proposed expansion or modification of the project – here, the addition of acid to both existing and brand new wells – a CEQA "responsible agency" like the Regional Board has the ability, and the legal obligation, to require supplemental environmental and public review before approving a project that potentially may affect the resources under its jurisdiction. *See* Attachment at 53-54. Accordingly, we strongly urge this Board to follow the same course as the North Coast Board and decline to issue a revised WDR Order unless and until such environmental review is completed and an opportunity for true public input is afforded.

It is unclear from the documentation posted on the Board's website as of the date of this letter whether the new Tentative WDR Order contains such a requirement. The accompanying Information Sheet states that:

> BLM determined that the pertinent environmental documents have failed to adequately address formation stimulation. The BLM has stated that no well other than No. 31-17 may be treated until additional NEPA and CEQA review have been completed. The Central Valley Water Board concurs with BLM's decision, and initially prohibits the use of formation stimulation on any well except No. 31-17 in this Order. At such time as NEPA and CEQA review of formation stimulation have been completed, this Order will be reopened, if necessary, to include additional

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[2] The Alternatives section of the Update Assessment includes a one-page narrative defining the term "well work over operations," but does not purport to assess such operations or to explain where, in any previous environmental documentation, such operations and their impacts are discussed. Indeed, this brief treatise on well stimulation technique does not even explain what, if any, stimulation techniques might be used for this project or why potential impacts would be considered insignificant. *See* Attachment at 62. It would be an egregious misreading of the law to conclude, several years later, that this abstract discussion in the Update Assessment, untethered to the specific impacts of the particular project in question, somehow shields from scrutiny any and all future acidization operations proposed by Calpine for dozens of wells, prevents the Board from requiring appropriate environmental review, or bars the courthouse doors to our Clients' challenge of such unevaluated activities.

> wells and conditions to address any additional mitigation measures relevant to water quality.

Similarly, Finding No. 8 in the Tentative Order states:

> This Order also prohibits formation stimulation on any other well within Telephone Flat or Fourmile Hill Unit Lease Areas, until the additional CEQA and NEPA review has been completed. Upon completion of environmental review, and approval of the Executive Officer, this Order will be reopened, if necessary, to allow formation stimulation of additional wells and specify any additional conditions to address mitigation measures relevant to water quality.

Yet, despite these public assurances, the actual permit conditions, as currently drafted, do not contain such a prohibition. *The final permit should, therefore, be modified expressly to incorporate a prohibition on acidization of any wells pending proper environmental review and reopening of the permit for public comment.*

C. The Regional Board Has Authority, and a Legal Mandate, to Protect Surface Water and Groundwater Resources.

In addition to the apparent confusion over what CEQA-compliant documents have been prepared, there was some question at the May 4 hearing over the scope of the Board's authority in this matter. As you know, the Porter-Cologne Water Quality Control Act confers very broad authority and duties on the Regional Boards to protect both surface water and groundwater. The statute defines "waters of the state" to mean "any surface water or groundwater . . . within the boundary of the state," and it charges the water boards with ensuring that the "quality of all the waters of the state shall be protected for use and enjoyment by the people of the state." Cal. Water Code §§ 13000, 13050(e). The Legislature intended to render this mandate operational by declaring that "activities and factors which may affect the quality of the waters of the state shall be regulated" by the water boards to ensure high quality. *Id.* In reviewing discharges that may affect waters of the state, the Regional Boards must, therefore, protect beneficial uses against potential degradation, with the term "beneficial uses" very broadly defined. *Id.* §§13263, 13 050(f). Accordingly, although the Board is not responsible for permitting the Development Project itself, it certainly has the authority and legal mandate to regulate the use of acids and their discharge to the environment where such activity could threaten surface or groundwater.

As our Clients' technical expert, Dr. Robert Curry, explains in his separate comments, there is every reason to be concerned about the impacts of acidization activities on the surface water and groundwater resources both in the Medicine Lake area and downstream. At the very least, further analysis of potential impacts and appropriate

mitigation safeguards, in the form of monitoring wells, is necessary to ensure that acids flowing through the wells and moving into the underlying geologic formations will not threaten existing beneficial uses of the area's high quality potable waters. Given the resources at risk here, further environmental review is not only strongly warranted as a factual matter, it is legally required by CEQA and the Porter-Cologne Act before the Board approves a revised WDR Order authorizing any acidization activities.

To that end, the Board requested at the May 4 hearing that Staff work with Dr. Curry to develop a plan for a technically adequate and defensible monitoring program. Following up on the Board's request, our non-profit Clients made Dr. Curry available *at their own expense* to provide assistance to Staff in this regard. As we explained to Staff, however, Dr. Curry's input will only be constructive if he is provided access to the underlying geologic and test data already available to Calpine and Staff. *See* July 27, 2006 Letter from Stanford Legal Clinics (Attachment at 96-99). Unfortunately, Staff subsequently informed us that because Calpine would not consent to disclosure of these data, Staff would not make the pertinent information available to Dr. Curry. Thus, even as Calpine seeks to vastly expand its existing authorization under WDR Order 95-199 without any additional environmental review, it has steadfastly denied access to the most pertinent scientific information by qualified experts, by our Clients, or by the larger public that may well be affected.[3] Accordingly, the Board should deny any revision of the WDR Order until the potential environmental impacts of doing so are fully disclosed to the public, based on available geologic and testing data or necessary new studies to obtain those data.

D. Existing WDR Order 95-199 Does Not Authorize the Activities Calpine Seeks to Conduct under the Proposed Revision.

Finally, the May 4 hearing also involved some unnecessary confusion over the scope of existing WDR Order 95-199. In particular, Staff suggested that if the Board did not approve a revised permit, with more protective conditions, Calpine may simply undertake the very same activities under the old, inadequate permit, thereby creating a greater risk than that associated with issuing the requested revised permit. This conclusion is patently incorrect, for two different reasons.

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[3] In response, our Clients have now requested this information pursuant to the Public Records Act. We urge the Board to direct Staff to provide this vital information to the public. If Calpine is truly concerned about the "propriety" nature of the information, our Clients are willing to consider the execution of a non-disclosure agreement, although it is difficult to understand how basic scientific information about geologic formations beneath federal public lands subject exclusive federal leases could harm Calpine's business interests.

First, as explained in detail above, the original WDR Order 95-199, issued long before the environmental reviews for the Development Project were completed, simply does not authorize either acidization or the dozens of development wells now being proposed for coverage under a revised permit. Indeed, the very limited scope of the existing WDR Order is precisely the reason why Calpine sought the additional authorization through a permit revision in the first instance.

Second, "waste discharge requirements . . . shall be adopted for a fixed term not to exceed five years for any proposed discharge, existing discharge, or any material change therein." Cal. Water Code § 13378. Thus, not only is the 1995 permit constrained by the particular types of exploratory wells it contemplated and authorized, but it now arguably has expired in accordance with the express terms of the Water Code and Calpine arguably holds no authorization to proceed with any well activities at this time.

Certainly, the Board has an ability to reopen or even terminate WDRs where there is a "change in any condition" or "failure to disclose fully all relevant facts." Cal. Water Code § 13381. The construction and operation of dozens of new wells and the proposal to discharge thousands of gallons of hazardous material into those wells constitutes either a very significant change in condition or an activity that was not fully disclosed in the original Report of Waste Discharge on which WDR Order 95-199 was based. Accordingly, if Staff truly believes that Calpine may attempt to use its existing permit to undertake these new but not-yet-authorized activities, we request that the Board take all appropriate steps to ensure against that possibility, such as by issuance of a clarifying order.

In conclusion, it is clear that the Board has the legal authority – and, in fact, the statutory obligation – to deny the proposed revisions of WDR Order 95-199 until and unless (1) Calpine undertakes proper environmental review, including both analysis of potential impacts to water quality and evaluation of appropriate monitoring and other mitigation conditions and (2) the Board circulates that assessment for meaningful public review and comment. The Pit River Tribe, Mount Shasta Bioregional Ecology Center, and Native Coalition for Medicine Lake Highlands Defense urge the Board in the strongest possible terms to fully comply with the law and protect the broader public interest at stake here by denying Calpine's application and remanding this matter to Staff for a full and adequate environmental review and public process. We appreciate your consideration of these comments and those additional comments provided by our Clients and their expert.

Sincerely yours,

Deborah A. Sivas